US Army Corps of Engineers
Galveston District

PROJECT UPDATE

2005

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Galveston Distict is the federal partner for infrastructure and environment

The US Army Corps of Engineers, Galveston District, serves the needs of the State and the Nation while contributing to the economic and environmental prosperity of the Texas gulf coast. They provide quality engineering, construction, environmental and real estate services. A highly versatile, technical and professional work force communicates effectively to satisfy customers with services that support coastal navigation, environmental restoration and flood damage control within the District boundaries.

Galveston District was the first engineer district in Texas. Established in 1880 to conduct river and harbor improvements along the Texas Gulf Coast, including construction of jetties to make Galveston Channel navigable. The district now covers 47 counties in Texas and three parishes in Louisiana.

Galveston District is almost entirely coastal in nature, encompassing the entire Texas coast from Louisiana to Mexico — 50,000 square miles. Its length, measured along the coast, is about 400 miles and it extends inland about 100 miles, including the major metropolitan area of the fourth largest city in the United States, Houston.

With its nearly 400 dedicated professionals, the Galveston District works to carry out its missions of navigation, flood damage reduction, and environmental restoration.

The district serves the vital Texas petrochemical refining industry, plus commercial and sports fishing. Waterborne commerce on its more than 1,000 miles of deep and shallow draft channels totals more than 400 million tons annually.

In 1949, the District completed the Gulf Intracoastal Waterway through Texas, opening up commerce along its route from Brownsville, Texas to the Okeechobee Waterway at Fort Myers, Florida and reaching throughout the United States by way of the inland waterway system. Features along its 426 miles through Texas include the Colorado River Locks and the Brazos River Flood Gates, designed to aid tows as they move up and down the GIWW.

Hurricane protection projects, built by the Corps at Texas City and Freeport, have saved the area millions of dollars in flood damages despite the fact there has been no major storm since their construction.

The Wallisville Project protects domestic water for Southeast Texas and the City of Houston. Recreation facilities at the project include boat ramps, parks and hiking trails. Duck hunting is permitted in the A similar water barrier on the Neches River gives domestic water protection from salt water incursion in the areas along the Texas/ Louisiana border.

The Galveston District regulator program works to provide strong protection of the Nation's aquatic environment, efficient administration of the Corp's regulatory program and fair and reasonable decision making for the regulated public. The program has the responsibility to manage Section 10 and Section 404 (Clean Water Act) permit programs. Its challenge is to protect the Nation's wetands and navigation channels.

The Corps' Operations and Maintenance Division provides safe, reliable, efficient and environmentally sustainable waterborne transportation systems (channels, harbors, and waterways) for movement of commerce, national security needs, and recreation.

The operation and maintenance of these channels, harbors and waterways requires a substantial amount of dredging. Nearly half of the District's yearly budget, allocated by Congress, is used for maintenance of the navigation channels within the District.

HOUSTON-GALVESTON NAVIGATION CHANNELS, TEXAS PROJECT

The Houston Ship Channel widening and deepening improvement portion of the Houston-Galveston Navigation Channels (HGNC) Project is nearing completion. But do not let that lead you to believe that the project is complete. Although the Entrance Channel and the Houston Ship Channel (HSC) have been dredged to the new width and depth the project still has a long way to go before it is complete.

The second portion of this project involves improvements to the Galveston Channel. These improvements are presently being developed with the Port of Galveston (PoG) and a Limited Reevaluation Report will be prepared to summarize the changes since the HGNC project was authorized for construction. A Project Cooperation Agreement (PCA) is being negotiated with the PoG and once the project cost sharing has been worked out and put into the PCA, the PCA together with the LRR will be submitted to the Assistant Secretary of the Army for approval. Once the PCA receives approval and is signed by both parties, plans and specifications can be developed to perform the construction.

The improvements to the 14.4 miles of Entrance Channel and the Houston Ship Channel (26.0 miles across Galveston Bay and 13.0 miles in the Bayou Reach) began the start of the creation of numerous beneficial use sites that include the construction of offshore beneficial use berm, bird islands, saltwater marshes, and other habitat for a variety of inhabitants. Over the economic life of the project approximately 4,250 acres of saltwater marsh will be constructed along with two bird islands and two islands for various types of habitat. In addition, barge lanes were constructed on each side of the main channel from Galveston to Morgans Point.

An offshore berm has been constructed using the dredged material from the Galveston Harbor Channel and from other reaches in Galveston Bay that contained excess soft material dredged from the Houston Ship Channel. This berm was constructed by controlled placement of the material dredged by hopper dredges.

Two bird areas in Galveston Bay, one an island and the other area at the northern end of Redfish Island, both six acres in size, have been constructed. Open beach areas and vegetation are

Evia Island

Redfish Island, looking east

Birds on Evia Island

Mid Bay, looking east.

being utilized to provide the habitat of the numerous waterfowl using the areas. In addition also two additional islands are being constructed in the landlocked reach of the Houston Ship Channel that will provide a destination for local residents, habitat for birds as well as other inhabitants that may be introduced to the islands.

Saltwater marshes are being constructed at three locations in Galveston Bay. At each of these locations constructing levees with the stiffer material that is being dredged from the channel is forming cells and then some of the cells are being filled with the softer dredged material. The capacity of the sites is presently being sized to contain the material estimated to be dredged from the initial construction and during the maintenance of the channel over the first twenty years. Additional capacity in the form of cells will be added in future years and will be considered to be deferred construction. Over the economic life of the project it is estimated that 4,250 acres of saltwater marsh will be constructed.

The initial dredging of the Houston Ship Channel is complete and only some piling that requires removal from the barge lane prior to the channel being announced that it is open for 45-foot vessel traffic. This however does not complete the construction of the authorized project in that additional capacity in the Galveston Bay reach still need to be constructed to provide capacity for the maintenance dredging that will occur over the 50 years of project life. The completed project does give the Port of Houston another competitive edge in the import and export of goods and keeps the Port competitive with other around the United States.

-- By Dalton Krueger

Clear Creek

The project is located in Harris and Galveston Counties, Texas. The purpose of the project is flood damage reduction for an extensively developed urban area. The authorized project consists of approximately 15.3 miles of channel enlargement and bend easing, more stringent regulations restricting development of the 100-year floodplain, and a second outlet channel with a gated structure between Clear Lake and Galveston Bay. Dredging and construction of the second outlet channel was completed in July 1997, and the outlet and gated structure were transferred in March 1998 to the local sponsor for operation and maintenance.

Control structure at Kemah is part of the Clear Creek project.

Opposition to the authorized project over environmental concerns arose during construction in 1997 and, as a result, led to the preparation of a General Reevaluation Report (GRR) that is currently ongoing. The local sponsors are the Harris County Flood Control District, Galveston County and, for the General Reevaluation Report, Brazoria Drainage District No.4. The GRR is scheduled for completion in 2006.

Proposed activities for 2005 include continued work on the GRR initiated in June 1999. Plan formulation, engineering analysis, socioeconomic analysis, real estate analysis, and environmental studies will be ongoing. Funds are not included in the budget for 2006. Funds in the amount of $1,500,000 could be used to continue the GRR activities. The GRR is currently scheduled to be completed in 2006.

-- By Mike Bragg

Greens Bayou

Greens Bayou, excluding its tributary of Halls Bayou, drains about 154 square miles in the north central area of the Buffalo Bayou watershed. A project was authorized by the Water Resources Development Act of 1990, however, a reevaluation of the project scope was determined to be required to formulate a project with reduced environmental impacts.

The new plan recommended consists of 3.7 miles of channel improvement in the upper reaches of the watershed, a detention basin at the downstream terminus of the channel improvements. There is no non-structural component in the new plan. The structural flood damage reduction features are estimated to provide a ten-year level of protection, at a cost of approximately $40 million.

The local sponsor for the project is the Harris County Flood Control District (HCFCD), a certified agent of the Harris County Commissioners Court in Texas. Fiscal Year 2005 funds are being used to complete General Reevaluation studies and process the report. Fiscal Year 2006 funds will be used to continue Preconstruction, Engineering and Design phase.

-- By Mike Bragg

Department of Homeland Security Immigration and Customs Enforcement

Galveston District's work for the Immigration and Customs Enforcement (ICE) strengthens our national security as well as helps to energize the economy.

Background

Galveston district has been designing and constructing facilities for the Department of Homeland Security's Immigrations and Customs Enforcement for approximately the past 10 years. Most of the work performed by Galveston District has been done at the ICE Port Isabel Detention Center (PIDC). The constructed facilities have included four 200 person dormitories, an Armory, a Maintenance building, a Segregation Unit and an Exercise Yard. Our support has included Master Planning, Programming (project scopes and cost), and various studies (Facility, Infrastructure, Environmental, etc.). The District has also assisted with numerous small Repair and Alteration projects such as: firing range environmental remediation, replacing security doors, hardware and locks, area lighting, replace and improve aira conditioning, paving projects, metal roof replacement and building repairs and expansions, etc.

Current Projects

Current projects include construction a $30 million project that includes an Administration building, a Processing building, and a Healthcare building. The Administration building will house the administrative staff of the facility, security, offices and four courtrooms. The Processing building will provide secure facilities to process detainees in and out of PIDC. The Healthcare is operated by the Public Health Service (PHS). It provides medical, dental, and pharmaceutical services for the 800 detainees.

The District is also designing a $4 million water tower. A $20 million Secure Dorm has been designed and is awaiting final approval and funding. The Secure Dorm will also require expansion of the water supply and waste treatment facilities.

-- By Benny Anderson

Brazos Island Harbor

Brazos Island Harbor is located approximately 7 miles north of the mouth of Rio Grande and about 5 miles east of Brownsville, Texas. The harbor provides deep draft access from the Gulf of Mexico through a jettied entrance channel to Brownsville, a side channel and a shallow draft Fishing Boat Harbor near Port Isabel. The project is 22.8 miles in length. Brazos Island Harbor is sponsored locally by both Brownsville Navigation District and the Port Isabel-San Benito Navigation District. The port of Brownsville, home port to NAFTA, is a first class deepwater port providing facilities for the movement of cargo from the U.S. and Mexico to Europe, Asia, and the rest of the world. Statistics compiled for calendar year 1996 show a movement of 2,515,000 tons of commerce.

In January 2005, Brazos Island Harbor Inside Jetty dredging was completed and included beach nourishment for sites for Cameron County and Town of South Padre Island. The Town of South Padre Island and GLO funded the extra pumping and placement costs for the material. Future contracts will continue to include the beneficial placement, beach nourishment. During FY06, surveys will be conducted to determine dredge material quantities at the Entrance Channel and Main Channel to Turning Basin. Production of engineering plans and specifications based on material quantities will be produced in order to award two contracts in the 1st Quarter of FY 06.

Dust Control of the placement areas continues to raise concern for the local population and will need to be mitigated. A successful design was implemented for Placement Area 4 and coordination should begin soon with the Port Isabel-San Benito Navigation District to replicate these successes in Placement Area 3. Maintenance Dredging of the Channel to Port Isabel is Scheduled for FY 2007.

-- By Volker Schmidt

Freeport Harbor, Texas

The Freeport Harbor project is located along the mid to upper Texas coast, and is formed by the improvement of the Brazos River, Texas, from the mouth about 6 miles upstream to Freeport, Texas. It provides for a 47 foot deep, 400 foot wide entrance channel; 45 foot deep, 400 foot wide main channel; 45 foot deep, 750 foot diameter turning basin; a 45 foot deep, 1200 foot diameter Brazos Port Turning Basin; a 45 foot deep, 1200 foot diameter Upper Turning Basin, 36 foot deep, 200 foot wide Brazos Harbor channel; and 36 foot deep, 750 foot diameter Brazos Harbor turning basin.

The local sponsor, the Brazos River Harbor Navigation District, is interested in examining the feasibility of improvements to the existing deep draft navigation channel and to determine the Federal interest in expanding the reach of the navigation channel to the Stauffer Channel and turning basin.

Freeport Harbor is an important port for imported petroleum products, exported petrochemicals, and general cargo. The existing channel is not sufficiently deep to fully load the existing tanker fleet serving Freeport Harbor. Further, the 400-foot wide entrance and main channels limit Freeport Harbor to one-way traffic for all vessels and daylight-only operation for larger vessels. The light-loading, one-way traffic, and daylight-only operation result in significantly higher cost to users than would be experienced if the harbor were enlarged and deepened. The Brazos River Harbor Navigation District signed a Feasibility Cost Sharing Agreement (FCSA) in July 2003.

Fiscal Year 2005 funds are being used to continue feasibility phase of the study. Fiscal Year 2006 funds will be used to continue feasibility phase studies. The preliminary estimated cost of the feasibility phase is $5,342,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests.

-- By Mike Bragg

GIWW – High Island to Brazos River – Interim Feasibility Study

This reach of the Gulf Intracoastal Waterway (GIWW) includes approximately 43 miles of channels in Galveston and Brazoria Counties, from Rollover Pass at GIWW Mile 330 to West Bay at Mile 373. Commerce transported along this section of the GIWW totaled nearly 50 million tons in 1994, with petrochemicals as the major commodity shipped.

The GIWW – High Island to Brazos River Interim Feasibility Study, recommended several improvements to the waterway between Rollover Pass and West Bay. The recommended project includes a sediment basin at Rollover Pass, widening the channel area to 75 feet for a length of 1400 feet at Sievers Cove, widening the channel at the Texas City Wye, setting back existing mooring facilities by 80 feet at Pelican Island, protecting existing open channels from wave action at Greens Lake, and establishing a mooring basin at the West Bay washout.

The estimated cost for the recommended plan is $15,700,000. The average benefit to cost ratio is 2.16 to 1, based on the latest economic analysis dated December 2002. The GIWW is designated as part of the Inland Waterway System. Construction costs for inland navigation improvements will be cost shared 50-50 from the Inland Waterway Trust Fund. The State of Texas is the non-Federal sponsor of the GIWW and maintains a high interest in the waterway because of their responsibility to provide dredged material disposal areas. The State's interest is evident through monthly meetings of the State-chaired Gulf Intracoastal Waterway Advisory Committee.

The project is not yet authorized for construction. Fiscal Year 2005 funds are being used to complete the Project Management Plan and initiate the PED phase. Fiscal Year 2006 funds will be used to continue engineering and design on the first set of plans and specifications.

-- By Mike Bragg

Continuing Authorities Program (CAP)

The Continuing Authorities Program establishes a process by which the Corps of Engineers can respond to a variety of water resource problems without the need to obtain specific Congressional authorization for each project. This decreases the amount of time required to budget, develop, and approve a potential project for construction. The Galveston District currently has nine CAP projects which require a wide diversity of technical experience in solving problems associated with shoreline and streambank erosion, navigation, flood control, and environmental restoration. Two projects are just completing construction, one is beginning, and six remain under study. Under this program the Corps is authorized to construct small projects within specific federal funding limits, which range from $500,000 to $5 million. The total cost of a project is shared between the federal government and a non-federal sponsor at varied cost shard percentages.

Setting Culvert Pipe and Gabion Baskets.

University of Texas Marine Science Institute (UTMSI) Section 206

Wetland restoration features will be constructed on 2.6 acres located on the UTMSI campus. In addition, approximately 1600 feet of dunes will be created. A broad range of estuarine habitat types will be constructed by removing several feet of the existing surface materials to achieve the target elevation contours necessary to support target communities. The creation of a number of diverse habitats, including open water, submerged aquatic vegetated shallows, low and high marsh, sand flats and upland islands and dunes, will allow for use of the area by several fish and wildlife species, including fishes, invertebrates, reptiles, small mammals and birds. Open water and marsh surface habitats will be constructed to resemble natural marsh systems in the area with undulating surfaces, high and lows, and a main channel with tributaries. The marsh system will be connected to the surrounding tidal waters to provide daily tidal exchange by installing two 36-inch culverts that will be completely submerged. The total project cost is an estimated $1,735,000. The local sponsor is responsible for 25% of costs. Construction is complete on one culvert and continuing construction is expected to resume in August of 2005.

Final Culvert Covering

Bessie Heights (Section 204)

Project rises to new Heights for district

Bessie Heights Marsh, an immense, freshwater marsh ecosystem that had deteriorated through subsidence of the land and the resulting intrusion of salt water, is on its way to returning to the unspoiled ecosystem of its former days. Combining efforts for the job are Jefferson County Waterway and Navigation District, the US Fish and Wildlife Service, National Marine Fisheries Service, Texas Commission on Environmental Quality, the Texas Parks and Wildlife Department and the USACE, Galveston District.

The marsh is located approximately two miles east of the Neches River in Orange County, Texas, in an area owned by the Texas Parks and Wildlife Department. The problems of Bessie Heights Marsh, which had lost nearly 90 per cent of its original emergent marshes and was regarded as a critically reduced habitat by the Texas Commission on Environmental Quality, was brought to the attention of the Corps in February, 2001.

Newly Planted Bailey Marsh

The middle reach of the Sabine-Neches Waterway is the source of the material used for this beneficial use of dredged material/marsh restoration project. Galveston District performs maintenance dredging in this area on an average of once every seven years. The next cycle was set for February 2003.

The District went to work and factored the dredging cycle and the desperate need for the marsh's improvement into a Section 204, Continuing Authorities Project. Section 204 provides for protection, restoration, and creation of aquatic and wetland habitats in connection with construction and maintenance dredging of an authorized project. Approximately 651,000 cubic yards of dredged material were pumped into an approximate 71-acre tract of the Bessie Heights marsh area.

Total project cost, according to Schmidt, was $1.2 million. This was split 75/25 between the federal government and the project sponsor, Jefferson Waterway and Navigation District.

-- By Byron Williams

Lower Guadalupe River Basin, Texas

Galveston District and the Guadalupe Blanco River Authority are starting a Feasibility Study to look into flooding issues along the Lower Guadalupe River below Victoria. The first item of work will be a computer simulation of the Guadalupe delta in order to determine the effect of man made structures on the river elevations and flows. Galveston District will begin data collection for the modeling effort in the fall of 2005.

-- By Richard Tomlinson

Neches River Basin Study, Texas

The Corps of Engineers is prepared to begin a Reconnaissance Study of the Neches River Basin, to identify needs and opportunities in the areas of Water Supply, Flood Damage Reduction, Ecosystem Restoration, Water Quality, Fish and Wildlife enhancement. The effort will be a collaborative effort between the local, State, and Federal agencies and authorities looking at all project purposes on a holistic watershed approach

-- By Richard Tomlinson

Cedar Bayou, Texas

The Chambers County Cedar Bayou Navigation District and the Corps of Engineers are completing a Feasibility Study and Environmental Impact Statement to improve 8 miles of navigation channel along Cedar Bayou to the dimensions of 10 feet deep by 100 feet wide. The design phase is expected to take place in 2006 and construction in 2007 and 2008.

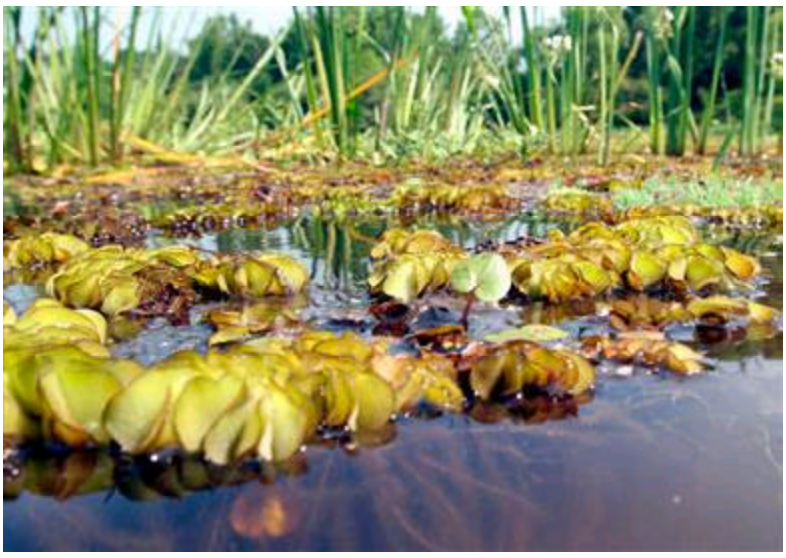
-- By Richard Tomlinson

Nueces River Basin Study, Texas

The Galveston District and Fort Worth District are partnering on a Feasibility Study to look at Ecosystem Restoration improvements in the Nueces River Basin in partnership with 5 local sponsors, City of Corpus Christi, San Antonio Water System, Nueces River Authority, Guadalupe-Blanco River Authority, and the San Antonio River Authority.

-- By Richard Tomlinson

Aquatic Plant Control Program, Texas



Giant Salvinia is a current scourge in Texas lakes and rivers.

Galveston District administers and manages the Corps of Engineers Aquatic Plant Control program in partnership with the State of Texas, Texas Parks and Wildlife Department. The Federal program is cost shared 50/50 and allows for the removal of invasive aquatic plants by chemical, biological, and mechanical means from public bodies of water within the State of Texas.

-- By Richard Tomlinson

Corpus Christi Ship Channel Improvement Project

The Corpus Christi Ship Channel is a federally constructed deep-draft navigation project serving the ports at Harbor Island, Ingleside and Corpus Christi in Nueces County, Texas. The existing project consists of approximately 35 miles of channels; a jettied entrance channel 45 to 47 feet deep and 600 feet wide from the Gulf of Mexico, the Corpus Christi Ship Channel with a depth of 45 feet and a width of 400 feet, and a branch channel referred to as the La Quinta Channel with a depth of 45 feet and a width of 300 feet. The five year average tonnage carried on this project is 64 million tons.

A feasibility study was begun in June 1999 to improve the existing channel to efficiently accommodate larger vessels of 100,000 DWT and greater that are frequently using the existing channel facilities. A Chief's report was signed in June 2003 culminating the feasibility phase of the project. Current efforts on the project are preparing the first set of plans and specifications for construction of the La Quinta Channel extension.

The improved channel design provides for deepening the entrance channel to 52 to 54 feet, deepening the Corpus Christi Ship Channel to 52 feet and widening the channel across Corpus Christi Bay to 530 feet and extending the La Quinta Channel 1.4 miles at a depth of 39 feet and 300 feet wide. The local sponsor, the Port of Corpus Christi Authority, has acquired a permit to construct a container terminal at the end of the extended La Quinta Channel. 200 feet wide barge lanes at a depth of 12 feet will also be constructed on each side of the Corpus Christi Ship Channel across Corpus Christi Bay. Three beneficial use sites will also be constructed with dredged material to improve the aquatic habitat in the bay. Estimated cost of the channel improvements is $172,940,000. Project is currently awaiting construction authorization.

British Petroleum's drilling platform "Thunderhorse" treks to the Gulf of Mexico after leaving assembly facilities on La Quinta Channel.

-- By Carl Anderson

GIWW – VICINITY OF PORT ISABEL, TEXAS

The Port Isabel navigation project is an existing navigation project located on the lower Texas coast between the Queen Isabella Causeway Bridge at Port Isabel and the intersection with the Brownsville Ship Channel. The existing project is a 12-foot by 125-foot channel transiting the Laguna Madre and passing under two bridges at Port Isabel before joining the Brownsville Ship Channel. The non-Federal sponsor for the feasibility phase of the study is the Texas Department of Transportation.

Since a loss of eight lives occurred in the 2001 because of a barge accident at the Queen Isabella Causeway, improving operational safety on the waterway at Port Isabel is a major objective of the study. The GIWW at Port Isabel is an important waterway for transporting petroleum products, especially fuel, to support the extensive agriculture based economy of the Rio Grande Valley.

-- By Paula Wise

Sabine-Neches Waterway, TX

The Sabine-Neches Waterway (SNWW) is a federally constructed deep-draft channel, which serves the Ports of Port Arthur, Beaumont, and Orange, Texas. The existing waterway consists of a jettied entrance channel, 42 feet deep and 500 to 800 feet wide, from the Gulf of Mexico; a channel 40 feet deep and 400 feet wide to Beaumont via the Neches River; and a channel 30 feet deep and 200 feet wide to Orange via the Sabine River. The study is investigating navigation modifications up to the Port of Beaumont to improve the efficiency and safety of navigation on the waterway. The Channel to Orange portion of the waterway is not part of this study.

The Port of Beaumont is ranked the #4 port in the Nation and the Port of Port Arthur is ranked 27th. The SNWW is used to transport over 149.9 million tons annually and has been designated a Strategic Waterway, supporting approximately one-quarter of the military cargo shipping to support Operations Enduring Freedom and Iraqi Freedom. Safe and efficient commercial navigation is of national interest, as the value of cargo shipped through the SNWW is estimated to be $40,094.5 million annually. Total direct, indirect and induced employment effects attributable to the Waterway are estimated to be 306,391 jobs and the total personal income effects are estimated at $12,869 million annually. Total business sales attributable to the Waterway are estimated to be $75,150 million.

In FY 2005, the study has developed proposed mitigation and restoration features in coordination with Texas, Louisiana, and Federal environmental agencies. The design and costs for these features has been determined and is being used to develop the "best-buy" combination of mitigation features using a Wetland Value Assessment Model and the IWR Plan model. The results will be used to finalize the NED plan and the EIS, with the draft Feasibility Report completion scheduled for FY 2006.

-- By Volker Schmidt

Sabine Neches Waterway

Channel to Harlingen (Arroyo Colorado)

The Channel to Harlingen (Arroyo Colorado) is located in the vicinity of Rio Hondo and Harlingen in Cameron and Willacy Counties, Texas. The project consists of a channel 25.8 miles long, 12 feet deep by 125 feet wideThe channel extends from its junction with the main channel of the Gulf Intracoastal Waterway through the Arroyo Colorado to the turning basin at Harlingen. It also includes a barge-mooring basin near the channel's junction with the Gulf Intracoastal Waterway. This channel provides access to shipping traffic that brings in over 90% of all unleaded gasoline in south Texas. Funds in FY2004 were used for emergency dredging from tropical systems that shoaling the channel. The channel is scheduled for routine maintenance dredging in FY2007. Maintenance of the project to authorized dimensions is a Federal responsibility. Safe and efficient commercial navigation is of national interest.

-- By Karl Brown

Texas City Channel, TX

The Texas City Channel (TCC) is a Federal deep-draft navigation project serving the port of Texas City in Galveston County, Texas. It consists of a main channel connecting a turning basin at the port to the Gulf of Mexico through Bolivar Roads, a part of the Houston Ship Channel. The main channel is 40 feet deep, 400 feet wide, and about 6.75 miles long, and the turning basin is 40 feet deep, 1,000 to 1,200 feet wide, and 4,253 feet long. In addition, the Industrial Barge Canal, 40 feet deep and 300-400 feet wide extends from the south end of the Texas City Turning Basin for 1.7 miles. At its head is a turning basin 40 feet deep, 1,000 feet wide, and 1,150 feet long. The main channel is protected from cross currents and shoaling by the Texas City Dike, which consists of a pile dike parallel to and north of the channel, and a rubble mound dike along the southerly side of the pile dike.

The Texas City Channel was authorized in WRDA 1986 to deepen the Texas City Turning Basin to 50 feet; enlarge the Texas City Channel to 50 feet by 600 feet; deepen the Galveston Entrance Channel to 52 feet and extend it 4.1 miles; and es- tablish 600 acres of wetland and development of water oriented recreational facilities on a 90-acre enlargement of the Texas City Dike. The sponsor, the City of Texas City, in a letter dated March 18, 2004, has requested a limited reevaluation study to deepen the Texas City Channel and the Texas City Turning Basin to 45 feet deep while maintaining the current width.

The Port of Texas City is ranked 9th of the Leading U.S. Ports, reporting 61.3 million tons in 2003. The value of cargo shipped through the Port is estimated to be $14,400,800. Total employment effects attributable to the ship channel are estimated to be 150,372. Total personal income effects attributable to the ship channel are estimated to be $6,316,000. Total business sales attributable to the ship channel are estimated to be $36,882,000. These estimates include direct, indirect and induced income effects of the project.

In FY 2005, hydrodynamic and ship simulation modeling was completed. Initial soil sampling, core boring, and cultural resource surveys have

-- By Volker Schmidt

Texas City Ship Channel

Rio Grande Valley Border Patrol Sector HQ

The three primary structures Customs & Border Protection will use as its new headquarters are approximately 70% complete with a scheduled opening in January 2006. They are located in Edinburg, Texas.

The 15,531-square-foot support building and 23,814-square-foot enforcement structure both have one floor each and are being built first.

A two-story management building totaling 19,401 square feet will also be constructed on 29 acres at the southeast corner of Trenton Road and U.S. Highway 281.

The construction work began in December 2004, and is overseen by the Army Corps of Engineers, Galveston district.

"The 22 million headquarters will replace the Border Patrol's small, aging facility on two acres on Wichita Avenue in McAllen. About 300 employees working at this location will move to the Edinburg site, along with legal staff now working in Harlingen," said Uvaldo Garcia, the sector's assistant chief in charge of new facilities and construction.

The Border Patrol will still use its McAllen sector building, which is located next to McAllen-Miller International Airport, for human resources management and vehicle maintenance.

The headquarters is expected to pump $3.4 billion into the city's economy during a 30-year period, according to information from the Edinburg Economic Development Corp. and the University of Texas – Pan American's economics department.

The sector, which consists of a geographical boundary formed by the Starr-Zapata county line to the west, the Rio Grande to the south, the Gulf Coast to the east and the Victoria-Edna area to the north, has grown from having 300 agents in the early 1990s to about 1,600 agents today. Border Patrol has had to lease buildings throughout McAllen for departments to use because of cramped conditions at its current sector headquarters.

Some of the features of the new headquarters include security cameras, detention ponds and lush landscaping. The buildings will have a structural steel frame with pre-cast concrete panel cladding. The interior walls will be steel studs with sheet rock. The structures will be connected by breezeways and will be elevated above the surrounding land for security reasons. Plaza-like buffers will also keep drivers from getting too close to the buildings.

-- By Bruce Briggs

View of side walk and ramp from exit hall 1176 of the Management building.

View of rip rap rock being set in place Around headwalls at detention pond #2.

North Padre Island (Packery Channel)

North Padre Island (Packery Channel) Construction of the North Padre Island Storm Damage Reduction and Ecosystem Restoration Project was authorized in WRDA 99. Local sponsor for the project is the City of Corpus Christi, Texas.

The construction contract was awarded to Luhr Bros., Inc. and King Fisher Marine Services, LP, a joint venture on July 30, 2003, in the amount of $21,375,044. Completion of the project is scheduled for September 21, 2005.

The project consists of dredging an opening from the Gulf of Mexico to Corpus Christi Bay providing tidal exchanges to improve the aquatic habitat in Corpus Christi Bay and the upper Laguna Madre. Dredged material is being placed on the beach south of the channel and restoring approximately 7,500 of beach to a width of 250 feet minimum. The restored beach will provide protection to the eroding foundations of the existing seawall south of the channel.

The main channel (Reach 1) is 122 feet wide at a depth of -14 feet MLT. The shoreline slopes are protected by concrete cellular mats to a depth of –2 MLT. The secondary channel (Reach 2) running from Texas Highway 361 north to the Corpus Christi Bay is 80 feet wide at a depth of – 8 feet MLT.

The project is in a highly sensitive environmental area with submerged aquatic grasses and nesting areas for the piping plover and Ridley turtle. The Mollie Beattie Wildlife Habitat area borders to the east of Reach 2. Extensive environmental coordination was conducted with the US Fish and Wildlife Service and the Texas Parks and Wildlife Service during the feasibility phase of the project to make the project environmentally acceptable to the resource agencies and the general public.

-- By Carl Anderson

Aerial view of Packery Channel.

Raymondville Drain

Additional funding was secured in May 2005 allowing the District to resume general reevaluation efforts which had been stopped in February 2005 due to lack of funds. Regrettably, limited federal funding continues to impede the District's progress on the Raymondville project.

The project sponsor, Hidalgo County Drainage District (HCDD) No. 1, in accordance with the Memorandum of Understanding with the Galveston District in September 2001, is proceeding with completion of study efforts for the development of the project features in Hidalgo County. HCDD No.1 remains committed to completing project study efforts for Hidalgo County in time for initiating construction in January 2006.

District study efforts had been postponed during the first half of the fiscal year due to limited FY 2005 funds. Study efforts to be accomplished during the second half of the fiscal year (Jun 05 to Sep 05) include hydrology and hydraulic, economic, environmental and cultural resource analysis to document and support the proposed plan of improvement for the South Main Channel.

-- By Ricky Villagomez

Hunting Bayou

The project sponsor, Harris County Flood Control District (HCFCD) under Section 211(f) of WRDA 96, is preparing the General Reevaluation Report (GRR) to identify the plan of improvements for the Hunting Bayou flood damage reduction project located in Houston, Texas within Harris County. The Alternative Formulation Briefing (AFB) for review of the proposed plan of improvements is scheduled for November 2005.

-- By Ricky Villagomez

White Oak Bayou

The project sponsor, Harris County Flood Control District (HCFCD) under Section 211(f) of WRDA 96, is preparing the General Reevaluation Report (GRR) to identify the plan of improvements for the White Oak Bayou flood damage reduction project located in Houston, Texas within Harris County. The Alternative Formulation Briefing (AFB) for review of the proposed plan of improvements is scheduled for January 2005.

-- By Ricky Villagomez

Mouth of Colorado River

This project is located in Matagorda County, Texas, and includes a shallow-draft navigation channel between the Gulf Intracoastal Waterway (GIWW) and Gulf of Mexico, entrance channel with jetties, harbor and turning basin, diversion dam and connecting channel, recreation, Parker's Cut dam, and an oyster cultch. Construction was completed in 1991. A Engineering Research and Development Center (ERDC) study has been completed to address solutions to navigation problems created by high current velocities that developed after construction. No economically and environmentally acceptable solution was found.

Funds received in the 2005 Budget ($45,000) are being used for review of diversion dam cut design assumptions. Additional funds ($150,000) could be used to initiate preparation of plans and specifications for construction of a small cut south of the diversion dam to allow for access to west Matagorda Bay from the navigation channel reducing the number of recreational boats passing through the Colorado Locks. Also, additional funds ($475,000) could be used to initiate studies to reduce dredging frequency at the jetties. Funds are not included in the budget for FY 2006. If no additional funds are received in FY 2005, funds in the amount of $1,150,000 could be used to prepare plans and specifications and initiate construction of a small cut south of the diversion dam, and $950,000 to initiate studies to reduce dredging frequency at the jetties, for a total of $2,100,000. The cost and frequency of maintaining the entrance of the Colorado River Navigation Channel are higher than expected; and the jetties and impoundment basin are not functioning as intended to keep the entrance channel open for commercial fishermen and shrimp boats. A reevaluation study has been proposed, however, funds have not been appropriated to initiate the study.

-- By Mike Bragg

Brays Bayou

Upstream Element

Construction of Discrete Segment 13 of the Eldridge Detention Basin, Discrete Segment 18 of the Arthur Storey Park Detention Basin, Discrete Segments 10 & 14 of the Old Westheimer Detention Basin and channel modifications from Old Westheimer to Hwy 6 are scheduled for completion in August 2005. Design efforts are also ongoing for other construction contracts scheduled for bidding during summer 2005. This work is being accomplished by the project sponsor, Harris County Flood Control District under Section 211(f) of WRDA 96, which authorizes non-Federal interests to plan, design, and construct Federal flood control projects, and upon approval of the project by the Assistant Secretary of the Army (CW), be reimbursed the Federal share of costs of work accomplished.

Downstream Element

The District has completed the compliance review of the General Reevaluation Report (GRR) for the Downstream Element, which provides an alternative flood control plan to the previously proposed Diversion plan. The GRR is scheduled for submittal to SWD/HQ in July 2005. Construction of Discrete Segment 112 - Channel Freshwater Marsh at Mason Park is scheduled for completion in August 2005. The project sponsor, Harris County Flood Control District under Section 211(f) of WRDA 96, is preparing the GRR and construction of discrete segment 112.

-- By Ricky Villagomez

Sims Bayou

The I-45 to Swallow Repairs contract was physically completed in May 2005. The Relief Wells contract and the Cullen to SH288 contract are on schedule for completion in September 2005 and April 2006, respectively. The Robin Boulevard to State Highway 288, Channel Rectification contract was awarded on 31 May 05 to Lecon, Inc., in the amount of $10,830,537.50. The work under this contract includes widening and deepening of the existing bayou, installation of storm drains, articulated concrete blocks, steel sheet piling, in-channel ponds, installation of relief wells, piezometers, removal and stockpiling of riprap and blanket stone and establishment of turf. Design work is ongoing for the remaining upstream reaches of the channel. The District is finalizing the Limited Reevaluation Report (LRR) for the Recreation Plan for submittal to SWD/HQ by the end of June 2005 for their review and approval.

Construction on Sims Bayou

-- By Ricky Villagomez

Gulf Intracoastal Waterway Modifications

The study area encompasses two locations on the Gulf Intracoastal Waterway (GIWW) along the Texas coast. One, the Brazos River Floodgates, is located approximately 7 miles southwest of Freeport, Texas, at the intersection of the Brazos River and the GIWW in Brazoria County.

The other, the Colorado River Locks, is located approximately 45 miles southwest of Freeport, Texas, at the intersection of the Colorado River and the GIWW in Matagorda County. Both projects improve navigational safety by controlling traffic flow and currents at these dangerous intersections. Both also serve to control sand and silt deposition at the intersection of the GIWW with the respective rivers. As sediment control structures, they reduce maintenance dredging costs by decreasing the trapping effects of the intersection.

The Colorado River Locks have an additional purpose to raise the navigation traffic from the GIWW to the level of the river during flood stages for crossing the river and lowering the traffic to the level of the GIWW after crossing. Delay costs are estimated to exceed $1 million annually at each location. In addition, the 75-foot gated thruway is too narrow to accommodate the new modern wider barges posing a major safety threat. The crossing was designed when barges were carried astern on a towline rather than the current practice of pushing a string of barges, making navigation of the crossing more difficult. Many tows have to "trip" or break down and moor their barges while taking one barge across at a time, causing delays, particularly during high river stages.

Currently, 17 to 25 million tons of commerce pass through these facilities each year. The Gulf Intracoastal Canal Association (GICA) and Texas Waterway Operators Association (TWOA) representing the GIWW users are very interested in improving navigation at these locations. The Feasibility Study objective is to formulate alternative plans that would reduce the navigation difficulties at the crossings, thus reducing the number of accidents, the resulting excessive damages to the facilities and barges, and traffic delays. Potential solutions for minimizing navigation delays and safety concerns include realigning the approaches to the crossings or increasing the width of the gates. The State of Texas, Texas Department of Transportation (TXDoT) is the non-Federal sponsor for this project. Although this study is fully Federally funded, construction of any recommended projects will be cost-shared with the Inland Waterways Trust Fund.

The on-going Feasibility study for the Colorado River Locks was suspended in 2004 to provide funds for other projects with critical milestones. Work remains suspended in 2005 pending assessment of District requirements. Funding has been insufficient to date to initiate the Brazos River Floodgates Feasibility study.

-- By Mike Bragg

South Main Channel

District study efforts had been postponed during the first half of the fiscal year due to limited FY 2005 funds. Study efforts to be accomplished during the second half of the fiscal year (June 05 to September 05) include hydrology and hydraulic, economic, environmental and cultural resource analysis to document and support the proposed plan of improvement for the South Main Channel.

-- By Ricky Villagomez

GIWW – High Island to Brazos River Realignments Interim Feasibility Study

This study has not been initiated.

-- By Mike Bragg

GIWW High Island to Brazos

The study area includes approximately 85 miles of the Gulf Intracoastal Waterway (GIWW) in Galveston and Brazoria Counties, from High Island, Texas, to the Brazos River. Tonnage transported along this section of the GIWW totaled nearly 50 million tons in 1994, with petrochemicals as the major commodity shipped.

Some of the problems identified by users along this reach include difficulties negotiating the two 90-degree bends west of the Highway 124 bridge at High Island causing steerage problems for tows, making it difficult for even one way traffic; high shoaling rates and associated transit delays at Rollover Pass; the area at Sievers Cove experiences periods of high wind and current causing navigation problems due to the limited clearance between the GIWW and placement area #41, limiting the barges ability to compensate for the wind and current; and problems arise at the Texas City Channel (west wye) due to width restrictions and defective channel markers.

Waterway users often continue to the intersections of the Texas City Channel and the GIWW before turning towards Texas City creating an unsafe condition due to currents as tows maneuver a 120 degree turn into a congested area used by ocean-going, deep draft vessels; the cut through Pelican Island provides the last protected area for eastbound traffic before crossing the Galveston causeway. Tows often stop during fast moving tides and high winds, causing congestion at this mooring facility as vessels wait for safe passage through the Galveston causeway.

Additionally, moored barges often extend out into the channel making passing through the area difficult requiring extreme care. Additional moorings are needed west of the Galveston causeway, as during periods of high winds, tows must push onto the bank in the sheltered area near Greens Lake and wait, sometimes for several days.

The four miles between Cow and Halls bayous are areas of serious erosion where shoaling often reduces the channel width, limiting traffic to one way. The problem is compounded by cross currents.

Investigations to identify potential solutions to resolve the navigation issues along this reach of the GIWW have been divided into two interim feasibility studies. The first study is the GIWW – High Island to Brazos River, Texas study. The study addressed potential improvements to the waterway between Rollover Pass and West Bay.

The GIWW – High Island to Brazos River Interim Feasibility was completed in July 2003. The second interim study, the GIWW – High Island to Brazos River Realignments Interim Feasibility, will include evaluation of navigation improvements in negotiating two 90-degree bends near High Island; difficulties negotiating a double "S" curve near Freeport; difficulties negotiating the intersection with the Chocolate Bayou Channel; and developing long range disposal plans.

The State of Texas is the non-Federal sponsor of the GIWW and continues to maintain a high interest in the waterway because of their responsibility to provide dredged material disposal areas. The State's interest is evident through monthly meetings of the State-chaired Gulf Intracoastal Waterway Advisory Committee. The GIWW is designated as part of the Nation's Inland Waterway System, and qualifies for 50-50 cost sharing from the Inland Waterways Trust Fund for construction of navigation improvements.

An initial appraisal of the entire 423-mile Texas Section of the GIWW was completed in November 1989. The reconnaissance study, completed in February 1995, concluded that modifications to the existing GIWW were economically feasible from reduction in delay benefits.

-- By Mike Bragg

O & M --Project Operation

ADDICKS AND BARKER DAMS AND RESERVOIRS BUFFALO BAYOU AND TRIBUTRAIES FLOOD CONTROL PROJECT, TEXAS

Addicks and Barker Dams and Reservoirs, located on the far west side of the City of Houston, is the anchor to the Buffalo Bayou and Tributaries Flood Control Project, which provides flood damage reduction to the metropolitan Houston area. Constructed in the mid 1940's, these two projects, located adjacent to each other on the upper watershed of Buffalo Bayou, serve as detention basins designed to collect excessive amounts of rainfall and release that rainfall down Buffalo Bayou at a controlled rate that prevent flooding in downtown Houston and the urban areas west of downtown.

In 2004, it is calculated that, through the operations of Addicks and Barker Dams and Reservoirs for flood water storage, $194,060,000 in flood damage prevention was realized in the areas downstream of the dams. This is a cumulative total of $2,239,471,000 in flood damage prevention realized in the over 60 year's life of the projects.

With the increase development of lands downstream of the reservoirs forcing the tighter regulation of the water releases and the increase development of the watershed upstream of the reservoirs causing increased runoff into the projects, the value of the dams and reservoirs for flood damage reduction is ever increasing. Three of the top five pools at both Addicks and Barker Dams and Reservoirs have occurred in the past 10 years.

The increase development of the lands around Addicks and Barker Reservoirs has also increased the value of the natural and recreational resources of the projects. Recreation was not an authorized purpose of the projects, however, through the leasing of lands to the City of Houston, Harris County, and Fort Bend County, the Corps has been able to provide the citizens of the metropolitan Houston area with some world class recreation facilities.

The Corps has been able to make available over 20,000 acres of the projects 26,000 acres to these local government agencies for recreational development. Through a tight review process within the Galveston District Office as well as with other local, state, and federal agencies having an interest in the projects, the Corps has been able to permit construct a variety of recreation facilities while protecting thousand of acres in there natural or near natural state for the benefit of the fish and wildlife located on the projects as well as our future generations.

Barker Structure

Some of the recreational facilities available on the projects include but are not limited to miles of hike and bike trails, 3 18 hole golf courses, a shooting range, a model airport, soccer facilities, baseball facilities, and hundreds of picnic sites. Visitation to these facilities has consisted exceeded 2,000,000 for the past few years. Additions to the available facilities during 2004 include over 5 miles of hike & bike trails and the Millie Bush Bark Park, a park area specifically designed for dogs.

For the visitor looking for a more relaxing and close to nature experience, the thousand of acres of undeveloped lands permits those visitors to enjoy nature in an urban environment. Two stops on the Great Texas Coastal Birding Trail are located in Addicks and Barker Reservoirs. The variety of wildlife that exist in the reservoirs range from deer, raccoon, and bobcat, to over 200 species of birds, to a large variety of reptiles and amphibians.

-- By Richard Long

WALLISVILLE LAKE PROJECT TRINITY RIVER AND TRIBUTARIES, TEXAS

The Wallisville Lake Project, located on the Trinity River approximately half way between downtown Houston and Beaumont, Texas, and bisected by Interstate 10, is a major contributor in the providing of safe and sustainable drinking water to the City of Houston and others through salinity control on the lower Trinity River.

The Wallisville Lake Project was first conceived in the 1950's and authorized in 1962, as a 20,000 acre water supply reservoir and salinity control project contained behind a concrete dam with a crest elevation of four feet above sea level. Work began on the project in the late 1960's but was halted in 1973 by a federal injunction for environmental reasons.

After an intensive review of the project by the Corps and modifications to the manor in which the project was to achieve it's goal of salinity control, permission was given to resume construction in the mid 1990's with completion of the project in 1999. The changes made to the project were significant. No longer was there going to be a 20,000 acre pool located behind a dam with a 4 foot crest. The revised project now protects the 20,000 acres of brackish and fresh water marsh, bottom land hardwood swamp, and cypress swamp for the protection of the fish and wildlife species associated with the project and the providing of recreational opportunities consistent with the protection of the natural resources while still providing for salinity control.

Previous to the construction of the Wallisville Lake Project, the Trinity River Authority's Lake Livingston was required to release up to 1,000 cubic feet of water per second in addition to the needs of the downstream users in order to prevent salinity intrusion up the river at times of drought. During the first full year of operations in 2000, a savings of water valued at $9,000,000. was realized because Lake Livingston was no longer required to release additional water. The value of this saved water has and will continue to increase as Houston and the surrounding communities grow and switches from ground water to surface water.

With the modification to the project, the Corps now had a unique opportunity to manage the diverse natural resources of this valuable habitat while providing recreation opportunities for the vast population of southeast Texas. Through careful planning and coordination with local, state, and federal agencies, the Corps has developed the opportunity for the public to get up close and personal with the environment in ways that were not available in the past while still maintaining the integrate of the environment.

The Corps has entered into agreements with Chambers County for the operation of a Corps constructed recreation on the banks of Lake Charlotte on the east side of the project and the construction and operation of a second park on the west side of the project. In addition, the Corps operates a recreation area and a visitor center adjacent to and in association with the salt water barrier, navigation lock, and field office. Through the development of the J.J. Mayes Wildlife Tract, a driving and walking nature trail complex, the Corps has also provided a unique opportunity for the public to experience the habitats associated with the lower Trinity River. The 3.5 mile driving nature trail allows the public a birds eye view of the marsh areas while the walking trails and board walks allows the public to be at eye level with the wildlife of the marsh and riparian habitat along the Trinity River. These facilities were completed in spring of 2002. Additional trails, boardwalks, overlooks and even a marked canoe trail are planed pending the availability of funds over the next few years.

-- By Richard Long

NECHES RIVER SALTWATER BARRIER

The Neches River Salt Water Barrier

The project is located just below the confluence of the Pine Island Bayou and the Neches River, and it provides for a permanent taintor-gated saltwater barrier structure, a navigation gate consisting of a single pair of sector gates, and an earthen overflow dam in the Neches River. The project is 100% operated by the local sponsor, Lower Neches Valley Authority.

The purpose of the project is to protect the municipal, industrial, and agricultural water supply of Southeast Texas from salinity intrusion.

A 1974 WES report concluded that 75% of the salinity in the Neches River is attributed to the 40' deep navigation project to Beaumont and 25% is due to water withdrawals by the local sponsor. A 1996 Corps reevaluation of the project resulted in a May 1997 decision by the ASA (CW) that the project go forward as a navigation mitigation project, with 75% Federal/25% Non-federal cost sharing. Operation and maintenance of the project is cost shared at 75% Federal/25% Non-federal.

-- By Ronnie Beasley

The salt water barrier during construction.

BRAZOS RIVER FLOODGATES

Brazos River Floodgates, at Mile 400 on the GIWW

The Brazos River Floodgates are located approximately 5 miles southwest of Freeport, Texas, between Mile Marker 400 and 401, measured west of Harvey Locks, Louisiana on the Gulf Intracoastal Waterway. The Brazos River Floodgates consist of two floodgates, each having two sector gates that have a horizontal clearance of 75 feet. Floodgate No. 13 is located on the GIWW east of the Brazos River and Floodgate No. 14 is located on the west side of the river. The floodgates are operated 24 hours per day, 365 days a year by US Army Corps of Engineer personnel.

The purpose of the floodgates is to aid navigation crossing the Brazos River and to control silting at the intersection of the GIWW and the Brazos River.

Commercial statistics show there were 21,409 tows carrying 42,739,100 tons of cargo passed both floodgates in 2004 along with 1,953 recreational vessels.

Under authority of Section 216 of the 1970 Flood Control Act, a reconnaissance study (905 (b) was completed in 2003 to determine the need and advisability of modifying the configuration of the crossing to reduce traffic accidents and delays. The study concluded that widening the facilities and moving them back away from the river is potentially feasible, and that it is in the federal interest to conduct a more thorough, feasibility-level study.

Due to shortage of study funds and because towing industry recommended that the Colorado River crossing be studied first, no additional feasibility study has been started for facilities at the Brazos River Crossing.

-- By Ronnie Beasley

Colorado River Locks

The Colorado Locks are the first operating locks in the state of Texas and are located approximately 0.5 mile south of Matagorda, Texas, between Mile 441 and 442, measured west of Harvey Locks, Louisiana, on the Gulf Intracoastal Waterway. The Colorado River Locks consist of two locks that measure 1,200 feet long and 75 feet wide. Lock No. 11 is located on the GIWW east of the Colorado River and Lock No. 12 is located on the GIWW west of the river. Each lock consists of four sector gates, two at each end, and each lock chamber can accommodate tows up to 1,180 feet in length. The locks are operated 24 hours per day, 365 days a year by US Army Corps of Engineers personnel. The West Lock is accessible only by boat.

The purpose of the locks is to aid barges and other waterborne traffic in crossing the Colorado River during periods of high water flow in the Colorado River. When normal river conditions exist, the locks are used as floodgates to prevent excessive tidal action and silting in the Intracoastal Waterway.

There were a total of 20,734 tows carrying 36,414,000 tons of cargo passing through both locks in 2004 along with 31,583 recreational boats.

Under authority of Section 216 of the 1970 Flood Control Act, a reconnaissance study (905 (b) was completed in 2003 to determine the need and advisability of modifying the configuration of the crossing to reduce traffic accidents and delays. The study concluded that widening the facilities and moving them back away from the river is potentially feasible, and that it is in the federal interest to conduct a more thorough, feasibility-level study. This study has been put on hold pending receipt of funds.

High water at the Colorado River Locks

-- By Ronnie Beasley

Colorado River Locks, Mile 441, GIWW

Brazos Island Harbor

Brazos Island Harbor is located approximately 7 miles north of the mouth of Rio Grande and about 5 miles east of Brownsville, Texas.

The harbor provides deep draft access from the Gulf of Mexico through a jettied entrance channel to Brownsville, a side channel and a shallow draft Fishing Boat Harbor near Port Isabel.

The project is 22.8 miles in length. Brazos Island Harbor is sponsored locally by both Brownsville Navigation District and the Port Isabel-San Benito Navigation District.

The port of Brownsville, home port to NAFTA, is a first class deepwater port providing facilities for the movement of cargo from the U.S. and Mexico to Europe, Asia, and the rest of the world. Statistics compiled for calendar year 1996 show a movement of 2,515,000 tons of commerce.

In January 2005, Brazos Island Harbor Inside Jetty dredging was completed and included beach nourishment for sites for Cameron County and Town of South Padre Island. The Town of South Padre Island and GLO funded the extra pumping and placement costs for the material.

Future contracts will continue to include the beneficial placement, beach nourishment. During FY06, surveys will be conducted to determine dredge material quantities at the Entrance Channel and Main Channel to Turning Basin. Production of engineering plans and specifications based on material quantities will be produced in order to award two contracts in the 1st Quarter of FY 06.

Dust Control of the placement areas continues to raise concern for the local population and will need to be mitigated. A successful design was implemented for Placement Area 4 and coordination should begin soon with the Port Isabel-San Benito Navigation District to replicate these successes in Placement Area 3. Maintenance Dredging of the Channel to Port Isabel is Scheduled for FY 2007.

-- By Ben Boran

The jetties for the Brownsville Ship Channel.

Gulf Intracoastal Waterway, Texas Reach

Maintained by the Galveston District

The Gulf Intracoastal Waterway (GIWW) in Texas extends from a point on Sabine River about 3 miles below Orange, Texas, to Brownsville, Texas a length of about 421 miles. The GIWW provides a conduit along the Texas coast for goods to reach various destinations with its many connecting tributary channels and several terminal and barge mooring facilities. There are also two navigation facilities on the GIWW that provide flood gate and lockage operations for waterway users.

GIWW traffic near Matagorda Bay.

Existing project: The GIWW is authorized at 12 feet deep (below mean low tide) and 125 feet wide from the Sabine River to Brownsville, Texas. Maintenance of the GIWW is ongoing and consists mainly of dredging. Regional Sediment Management along the GIWW is paramount to maintaining the waterway. The Galveston District is proactive along the GIWW using maintenance material beneficially whenever possible.

Maintenance: FY 04 maintenance costs were approximately 25.5 million dollars. These costs are unequally divided between maintenance dredging and flood gate/lock facility operations. The lion's share of the operating budget goes toward maintaining the 421 miles of the GIWW for navigation purposes. The Galveston District is expected to spend near 20 million in FY 05 to maintain the waterway. This funding shortfall has severely limited our ability to take care of our customers and the waterway. Being creative and prioritizing obligations with limited funding appears to be the new motto for maintaining federally authorized navigation channels.

-- By Ben Boran

Mouth of the Colorado River

The project is located in the vicinity of Matagorda in Matagorda County, Texas. The Mouth of the Colorado River consists of an entrance channel 15 feet deep and 200 feet wide with jetties to protect the entrance in the Gulf, a 6.5 mile navigation channel, 12 feet deep and 100 feet wide, and a harbor and turning basin adjacent to the Gulf Intracoastal Waterway, and two recreation areas.

Frequent dredging is needed to clear the shoaling at the mouth of the Colorado River.

Diversion features consist of a 3.1 mile long channel with a 20 foot depth and a 250 foot width to divert the flow of the Colorado River into Matagorda Bay, a diversion dam and navigation connecting channel, closing of Tiger Island Channel, and creation of an oyster cultch in Matagorda Bay. Maintenance dredging in FY06 will cost $2,100,000 to complete which includes hydrographic surveys, placement area surveys, rebuild a placement area, and maintenance dredging.

The Federal channel is currently shoaled to 2 feet and is an extreme navigation hazard to all users since boaters must time the tide to utilize the project. The Project Sponsor, Counties, and Local governments rely heavily on the recreation fishing industry and commercial/recreational aspects of sport fishing that the Federal project provides.

Without access to the Gulf, all supporting entities will experience severe economic hardship results. We indicated a need for FY2006 funds (as we do every budget submission) to perform maintenance dredging at the MOC Entrance; unfortunately it did not make the Presidents FY06 Budget; however, the need remains extremely critical.

-- By Ronnie Barcak

Channel to Port Mansfield

The Channel to Port Mansfield is a 10.3 mile shallow draft channel from the Gulf of Mexico across the lower Laguna Madre to Port Mansfield. It includes a jettied entrance channel of about 0.7 mile long from the barrier island into the Gulf of Mexico. The channel crosses the main channel of the Gulf Intracoastal Waterway at Mile 630.

Funds provided in FY 2005 will be used late in the fiscal year to perform surveys and monitor shoaling of the north jetty and/or the channel itself. Plans and specifications will be initiated based on this information.

Subject to future appropriation, a contract could be awarded at the beginning of FY 2006 to construct an erosion control structure on the north jetty. Constructing the erosion control structure is needed to prevent an impending failure of the north jetty due to the severe erosive environment. Alternatively, the funds could provide a limited dredge job that would result in temporary relief for navigation concerns. Minimal dredging would also provide material for beach re-nourishment, as a temporary resolution to the existing erosion situation at the north jetty

-- By Alicia Rea

Freeport Harbor

The Harbor is a 45-foot channel and one of the top deep-draft ports in the Nation, ranked no. 24 in 2003. Maintenance requirements include annual dredging of the Entrance and Jetty Channel, primarily performed in the fall/winter, and maintenance dredging of the Inside Harbor Channel on a 3 year recurrence.

The Entrance and Jetty Channel work is performed with a Hopper Dredge with placement in an offshore site. Inner Harbor work is typically accomplished by cutterhead dredge, with material deposited in upland confined placement areas.

The Port is pursuing further improvement to as much as 60 feet depths for its petroleum transits. Freeport Harbor is also moving forward with LNG development. Besides the substantial petroleum and chemical products, other major commodities include bananas and rice. Dredging the entrance channel will cost $2,700,000 to complete including hydrographic surveys, placement area surveys, and maintenance dredging in FY06.

Failure to maintain this project to a reliable depth will cause interruptions to vessel traffic to one of the largest petrochemical complexes on the Gulf Coast. Economic Impacts of $7.06 billion annually and produced approximately 30,000 jobs. Many of the industries at the port maintain "just in time" inventory levels and interruption in supply will result in temporary plant closures having negative effects on local and national economies.

-- By Ronnie Barcak

Matagorda Ship Channel

The Matagorda Ship Channel is a 36-foot deep-draft Federal Channel ranked no. 49 in the Nation in 2003. Maintenance requirements have increased over the years, primarily because of the growth of utilization. Maintenance dredging typically has been on a 2 year recurrence; however, dredging needs have been identified and performed on an annual basis for the upper reach. Maintaining the deep draft channel to 36 feet will cost $2,800,000 to complete including hydrographic surveys, placement area surveys, and maintenance dredging. High shoal rates occur in the upper reach and must be redredged before contract completion. Economic losses arise when project depth is unavailable. Industry fully utilizes their 36 feet depth transporting 11.7 million short tons of cargo.

-- By Ronnie Barcak

Operations & Maintenance

Channel to Victoria

The project is located in the vicinities of Seadrift and Victoria in Calhoun and Victoria Counties, Texas. The Channel to Victoria project provides a 34.8 mile shallow draft channel extending from its junction with the main channel of the Gulf Intracoastal Waterway at Mile 492 northwesterly across San Antonio Bay through a landlocked section lying east of the Guadalupe River and terminating at the turning basin near the City of Victoria. The Channel to Seadrift project provides a 2 mile shallow draft channel extending from the Channel to Victoria northeasterly and terminating at the turning basin at Seadrift. Dredging the lower and middle reach will cost $4,600,000 to complete including hydrographic surveys, placement area surveys, and maintenance dredging in FY06. Failure to maintain this project to a reliable depth will compel users to restrict cargo loads causing economic losses. In 2004 the Port of Victoria handled 5,711 barges accounting for 2,045,878 short tons of cargo. Chemicals, fertilizers, sand and gravel comprise the largest inbound/outbound cargos from the port. The Port of Victoria has recently signed a memorandum of agreement with the Port of Houston for a container on barge project between the two ports. Maintaining the waterway for this 81st ranked port is vital for the local economy.

-- By Ronnie Barcak

Channel to Victoria at Greens Lake

Chocolate Bayou

The Chocolate Bayou Channel is a Federally authorized 8.2 mile long channel which traverses Chocolate Bay connecting industries at the northwest end of the bay within Chocolate Bayou with the Gulf Intracoastal Waterway. The channel, currently maintained at 12-feet deep (MLT) by 125-feet wide, is primarily used for transportation of crude petroleum and petrochemical products. The maintenance dredging frequency for the channel is every four years. This project provides a management plan that will utilize maintenance material from dredging of the Chocolate Bayou Channel, over a 20-year period, to create and enhance approximately 560 acres of marsh and bird-nesting habitat within the Chocolate Bay area. FY06 Dredging requirements will cost $2,600,000 to complete which includes hydrographic surveys, placement area surveys, and maintenance dredging. Commercial barges are currently light loading to 7 foot depth causing increased transportation costs inbound and outbound. Chocolate Bayous main commodity inbounds is petroleum and refined chemicals outbound. Three chemical companies provide 5,200 jobs directly tied to this project and 22,000 jobs tied indirectly to Chocolate Bayou. Failure to maintain this project in FY 2007 to a reliable depth will compel the user to reduce operations by laying off 1/3 of their workforce or one of three shifts.According to IWR published statistics, the value of cargo shipped from Chocolate Bayou in 2004 was $400,000,000.

-- By Ronnie Barcak

Corpus Christi Ship Channel

The Corpus Christi Ship Channel (CCSC) is a high-use commercial deep draft channel that extends from deep water in the Gulf of Mexico through a jettied entrance channel and across Corpus Christi Bay, 34.1 miles inland to the Inner Harbor. The Port of Corpus Christi Authority (POCCA) is the local sponsor for the CCSC. Ranked 7th of the Leading U.S. Ports, the Port of Corpus Christi is a Strategic Deployment Seaport for U.S. military forces. Deployment activities are ongoing for Operations Enduring Freedom and Iraqi Freedom. Out of 84M tons that moved through the Port in 2003, 76M tons were petroleum and petro-chemicals. The value of cargo shipped through the CCSC is estimated to be $20,417,700. Total employment effects attributable to the CCSC are estimated to be 195,466. Total personal income effects attributable to the CCSC are estimated to be $8,210,000. Total business sales attributable to the CCSC are estimated to be $47,943,000. These estimates include direct, indirect and induced income effects of the project.

-- By Cynthia Burke

Texas City Ship Channel

The Texas City Ship Channel is a 7.3 mile long deep draft channel extending from Bolivar Roads in Galveston Bay to Texas City, Texas. The City of Texas City is the local sponsor. The Port of Texas City is ranked 9th of the Leading U.S. Ports, reporting 61.3 million tons in 2003. The value of cargo shipped through the Port is estimated to be $14,400,800. Total employment effects attributable to the ship channel are estimated to be 150,372. Total personal income effects attributable to the ship channel are estimated to be $6,316,000. Total business sales attributable to the ship channel are estimated to be $36,882,000. These estimates include direct, indirect and induced income effects of the project.

-- By Cynthia Burke-

Cedar Bayou

Cedar Bayou is an important high-use shallow draft channel off the Houston Ship Channel leading to Baytown, Texas. In 2004, 1,110,700 tons of mostly petro-chemical cargo moved along Cedar Bayou. The value of cargo barged is estimated to be $894,300. Total employment effects attributable to the ship channel are estimated to be 2,458. Total personal income effects attributable to the ship channel are estimated to be $103,000. Total business sales attributable to the ship channel are estimated to be $603,000. These estimates include direct, indirect and induced income effects of the project

-- By Cynthia Burke

Houston Ship Channel

This navigation project is located in the vicinities of Houston, Pasadena, Deer Park, Jacinto City, Galena Park, and La Porte in Galveston and Harris Counties, Texas. The Houston Ship Channel is a 54.0 mile long deep draft (45) waterway which extends from Bolivar Roads near Galveston, Texas, north through Galveston Bay, the San Jacinto River, and Buffalo Bayou to a Main Turning Basin at Houston, Texas. The project also includes a 6.5 mile long shallow draft reach. The Light Draft Channel extends upstream of the Main Turning Basin. The Port of Houston is ranked the #2 port in the Nation with over 190.9 million tons annually transported on the channel mainly supporting the petrochemical industry. Safe and efficient commercial navigation is of national interest, as the value of cargo shipped through the Houston Ship Channel is estimated to be $76,484.7 million. Total employment effects attributable to the Houston Ship Channel are estimated to be 478,610 jobs. This estimate includes direct, indirect and induced employment effects of the project. The total personal income effects attributable to the Houston Ship Channel are estimated to be $20,103 million. Total business sales attributable to the project are estimated to be $117,390 million. These estimates include direct, indirect and induced income effects of the project.

In the FY 2006 Presidents Budget, $3.261 Million has been requested for maintenance dredging of the channel along the reach from the entrance of Bayport Channel to Morgans Point. The reaches from Red Fish Island to Morgans Point, and Greens Bayou to Sims Bayou, as well as repair and rehabilitation of the Clinton Placement area could be completed with an additional funding.

-- By Major Sean Jones

Sabine-Neches Waterway, TX

This navigation project is located in the vicinities of Beaumont, Port Arthur, Orange, and Sabine Pass in Jefferson and Orange Counties, Texas, and Cameron and Calcasieu Parishes, Louisiana. The Sabine-Neches Waterway (SNWW) is a 79 mile deep draft (40) ship channel which extends from the 42-foot contour in the Gulf of Mexico through a jettied channel to Port Arthur, to Beaumont via the Neches River Channel, and to Orange via the north part of Sabine Lake and continues via the Sabine River Channel.

The Port of Beaumont is ranked the #4 port in the Nation with over 149.9 million tons annually transported on the SNWW. The SNWW has been designated a Strategic Waterway, supporting approximately one-quarter of the military cargo shipping to support Operations Enduring Freedom and Iraqi Freedom. Safe and efficient commercial navigation is of national interest, as the value of cargo shipped through the SNWW is estimated to be $40,094.5 million. Total employment effects attributable to SNWW are estimated to be 306,391 jobs. This estimate includes direct, indirect and induced employment effects of the project. The total personal income effects attributable to SNWW are estimated to be $12,869 million. Total business sales attributable to the project are estimated to be $75,150 million. These estimates include direct, indirect and induced income effects of the project.

In the FY 2006 Presidents Budget, $13.478 million has been requested for maintenance dredging of the waterway. Project reaches include perform maintenance dredging of the Sabine-Neches Canal and Rehabilitation of Placement Area 11, Outer Bar and Bank Channel. If additional funds are available we are capable of performing maintenance dredging on the Port Arthur Canal and Junction Area and Rehab Placement Area 8, Lower Neches River Channel, and Sabine River Channel.

-- By Major Sean Jones

Galveston Harbor and Entrance Channel

This navigation project is located in the vicinity of Galveston, Texas in Galveston County. Galveston Harbor and Channel is a 14.4 mile deep draft (40) channel that extends from deep water in the Gulf of Mexico through a jettied entrance channel to Galveston Bay near Port Bolivar. From this point, the channel portion extends up to 43rd Street in Galveston, Texas.

Maintenance of the project to authorized dimensions is a Federal responsibility. Safe and efficient commercial navigation is of national interest. Statistics show movement for the Galveston Entrance, Outer Bar and Inner Bay Channels for traffic bound for Texas City, Houston, and Galveston of 205.5 million tons of commerce with Galveston Harbor receiving 7.545 million tons channel last year with an estimated value of $2,885.9 million. Total employment effects attributable to Galveston Harbor Channel are estimated to be 23,414 jobs. This estimate includes direct, indirect and induced employment effects of the project. The total personal income effects attributable to Galveston Harbor Channel are estimated to be $983 million. Total business sales attributable to the project are estimated to be $5743 million. These estimates include direct, indirect and induced income effects of the project.

We are scheduled to perform maintenance dredging of the Jetty and Entrance Channels in FY 2006 as well as completion of the Galveston Harbor dredging. $4,800,000 was requested for the FY 2006 Presidents Budget.

-- By Major Sean Jones

Bayport Channel

Located in the vicinities of Houston, Pasadena, La Porte, and Shore Acres in Harris County, Texas, the Bayport Ship Channel and Turning Basin is a 4.5 mile long deep draft waterway extending from the Houston Ship Channel at Mile 20.5, west across Galveston Bay.

Over five million tons of cargo traveled through the channel last year with an estimated value of $4,199 million. Total employment effects attributable to Bayport Channel are estimated to be 9,603 jobs. This estimate includes direct, indirect and induced employment effects of the project. The total personal income effects attributable to Bayport Channel are estimated at $403 million. Total business sales attributable to the project are estimated to be $2355 million. These estimates include direct, indirect and induced income effects of the project. This channel is also the location of the new Houston area cruise ship terminal as well as the future home of an expanded container terminal.

$2,875,000 has been requested in the FY 2006 Presidents Budget for maintenance dredging of the channel.

-- By Major Sean Jones

Barbour Terminal Channel and Turning Basin

This project is located in the vicinities of Houston, Pasadena, La Porte, and Shore Acres in Harris County, Texas. The Barbour Terminal Channel and Turning Basin is a 1.7 mile long deep draft waterway that extends from the Houston Ship Channel at Mile 26.3, west across Galveston Bay.

Over 10 million tons of cargo traveled through the channel last year with an estimated value of $27,092.8 million. Total employment effects attributable to Barbour Terminal Channel are estimated to be 17,590 jobs. This estimate includes direct, indirect and induced employment effects of the project. The total personal income effects attributable to Barbour Terminal Channel are estimated to be $739 million.

Total business sales attributable to the project are estimated to be $4,314 million. These estimates include direct, indirect and induced income effects of the project. There is no funding in the Presidents Budget for FY2006.

-- By Major Sean Jones

Greens Bayou

This navigation project is located in the vicinities of Houston, Pasadena, Deer Park, Jacinto City, and Galena Park in Harris County, Texas. The Greens Bayou Channel is a 1.6 mile long shallow and deep draft waterway which extends from the Houston Ship Channel at mile 42.9, northeast up Greens Bayou. Maintenance of the project to authorized dimensions is a Federal responsibility. Safe and efficient commercial navigation is of national interest.

Over 5 million tons of cargo traveled through the channel last year with an estimated value of $454.2 million. Total employment effects attributable to Greens Bayou Channel are estimated to be 2271 jobs. This estimate includes direct, indirect and induced employment effects of the project. The total personal income effects attributable to Greens Bayou Channel are estimated to be $95 million. Total business sales attributable to the project are estimated to be $557 million. These estimates include direct, indirect and induced income effects of the project.

$650,000 has been requested for the FY2006 Presidents Budget for maintenance dredging of the channel.

-- By Major Sean Jones

Emergency Management

Natural Disaster Preparedness Program.

This congressionally authorized program (PL 84-99) provides for disaster preparedness, flood-fighting, Rehabilitation and Inspection of Flood Control Works, drought and emergency water assistance, advance flood-fight measures, and hazard mitigation. The District's focus is on preparedness with coordination with state and local government a high priority. In additional to regular participation in local government emergency management meetings, the District exhibited at the Texas Emergency Management Conference in Waco, the National Response Plan Roll-out in Houston, and Texas Hurricane Conference in Beaumont where a short course on Distribution Point Planning was also held. On the preparedness planning side, the District's Hurricane Plan was expanded into an all-hazard Emergency Operations Plan and is now available on the District's web site. Planning efforts also included revision of the Addicks-Barker Emergency Operations Plan to address the new National Incident Management System (NIMS) Incident Command System (ICS). With the implementation of the National Response Plan, the District's Emergency Management staff completed training for certification in NIMS ICS. In support of national preparedness initiatives, the District supports the Southwestern Division leadership role for seven Emergency Ice Mission Planning and Response Teams (PRT) Corp-wide. In support of PRT planning, the District participated in a number of HQ-sponsored meetings to improve management of disaster com-modities and participated in developing a guide to Distribution Point Planning. In supporting the Ice PRTs, the District awarded the second option year of a contract to provide emergency supplies of ice to disaster victims. The contract with IAP World-Wide Services was used during last season's hurricane response to provide over 160,000,000 pounds of ice for disaster victims. While this contract will expire in January of 2006, the District has begun work to develop a new contract for the 2006 hurricane season.

National Emergency Preparedness Program.

This program provides for those activities to prepare for the District's response to catastrophic natural and technological disasters, and acts of terrorism in support of state and local governments overwhelmed by the disaster event. Preparedness involves development of plans, training employees, conducting exercises and coordinating with DOD and other Federal agencies, state, and local governments. Recent activities have focused on regular coordination with other Federal agencies at Port Readiness, Area Maritime Security, and Regional Response Plan Area Committee meetings for the Ports of Houston//Galveston, Corpus Christi, and Beaumont/Port Arthur. The District also participated in January's semi-annual meeting of the Region 6 Regional Response Team.

-- By Gus Marinos

Flooding along Hwy 59 in Houston.

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